REMARKS

Claims 21-27 and 29-40 are pending in this application. Claims 21, 36, and 39 have been amended. Claim 21 has been amended to incorporate claim 40. Additional support for the amendment can be found at least at paragraph 0066 of the application. Claim 36 has been amended to correct grammatical errors. Claim 39 has been amended to correct a typographical error. Claim 40 has been canceled. Accordingly, claims 21-27 and 29-39 are at issue herein.

Claims 21-23, 26, 27, 29-32, 34, 35, 39, and 40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 2,140,735 ("Clarke") in view of U.S. Patent No. 1,245,233 ("Hynes"). The Applicants respectfully traverse this rejection.

With regard to claim 21, both Clarke and Hynes fail to disclose an injection head for ejecting a flowable substance, wherein "a plug is disposed within the chamber at an end of the spindle opposite that connected to the actuator" and "the two larger diameter portions are positioned to connect the purge and supply ports and to cause the end of the spindle opposite the actuator and the plug to seal off and to block the outlet and an injection port such that when the injection spindle retracts from the deployed position, the plug remains in communication with the injection port to block the injection port, and wherein the injection head is removable from the injection port after the injection spindle is disposed in the deployed position such that the plug remains blocking the injection port and the end of the spindle opposite the actuator remains sealing off the outlet after the injection head is removed from the injection port" as presently recited in claim 21.

The Office Action alleges that Clarke discloses the injection spindle stating "the injection spindle has a diameter smaller than that of the chamber (Fig. 2, item 37) and is provided with respective larger diameter portions adjacent its two ends (Fig. 2, items 38, 39)" (page 3 of the Office Action). However, the Office Action further alleges that Figure 2, item 39 of Clarke also discloses "a plug for blocking the outlet … disposed within the chamber at an end of the spindle opposite that connected to the actuator" (p3 of the Office Action). It is

respectfully submitted that item 39 of Clarke cannot be both claimed structures. If items 37, 38, 39 of Clarke is to be analogous to the injection spindle of the present claim, there is no structure disclosed in Clarke that can be the plug. Similarly, if item 39 of Clarke is to be analogous to the plug disposed at the end of the spindle, then the spindle cannot have the required, recited structure. Therefore, Clarke does not disclose a plug "disposed within the chamber at an end of the spindle opposite that connected to the actuator" as presently recited in claim 21.

The Office Action admits that Clarke does not specifically teach that an "injection port is located such that when the spindle retracts from the deployed position the plug remains in communication with the injection port to block the injection port" (page 3 of the Office Action). As discussed above, Clarke does not disclose both an injection spindle and a plug as recited in the present claim. In addition to Clarke not disclosing an injection port, there is no plug disclosed in Clarke that could remain in communication with an injection port when the injection spindle retracts. As the Office Action has alleged, if item 39 were to be the plug that remains in communication with an injection port, the structure of the injection spindle, which has been alleged to be items 37, 38, 39, would be destroyed.

Finally, Clarke contains no disclosure of an injection head being removable from an injection port. As previously asserted, there is no structure in Clarke analogous to the recited injection port. As such, there can be no removal of an injection head from an injection port. However, even if the Office Action was to allege a structure to be the injection port, there is no structure disclosed in Clarke that could be alleged to be a plug remaining blocking the injection port and the end of the spindle remaining sealing off the outlet after the injection head is removed from the injection port.

Hynes does not overcome the failings of Clarke. Hynes does not disclose a plug "disposed within the chamber at an end of the spindle opposite that connected to the actuator" as presently recited. Rather, Hynes discloses a single valve 33, mounted for vertical

reciprocation between valve seats 31, 32. Hynes therefore does not disclose an injection spindle as recited in claim 21, nor does Hynes disclose a plug at the end of the spindle.

Hynes does not disclose a structure wherein "when the injection spindle retracts from the deployed position, the plug remains in communication with the injection port to block the injection port" as presently recited in claim 21. The valve 33 is mounted onto the valve stem 35 and is not intended to be separable from the stem 35 as such a separation would destroy the function of the structure shown in Figure 3 of Hynes.

Finally, there is no analogous structure in Hynes such that "the plug remains blocking the injection port and the end of the spindle opposite the actuator remains sealing off the outlet after the injection head is removed form the injection port" as recited in claim 21. Therefore it is respectfully requested that the rejection as it applies to claim 21 be withdrawn.

Claims 22-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Clarke in view of Hynes, and further in view of US 2,806,075 ("Gaubatz"). Claims 25 and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Clarke in view of Hynes, and further in view of US 3,695,149 ("Eberhart"). Claim 33 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Clarke in view of Hynes, and further in view of US 3,015,227 ("Barber"). Claim 36 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Clarke in view of Hynes, Eberhart, and further in view of US 4,741,364 ("Stoss"). The Applicants respectfully traverse these rejections.

In view of the above discussion as it applies to claim 21, it is respectfully submitted that claims 22-37 and 39, dependent therefrom, are allowable as well.

Claim 38 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over US 5,665,301 ("Alanko") in view of US 5,187,001 ("Brew") and Hynes. The Applicants respectfully traverse this rejection.

In regard to claim 38, the combination of Alanko, Brew and Hynes fails to disclose a molding system comprising "an injection head releasably connected to the injection port for injecting a flowable substance into the closed mold, including a housing with a chamber

defined therein having a supply port, a purge port, and an outlet, an actuator connected to the housing, an injection spindle connected to the actuator and slidably retained within the chamber between an ejection position and a deployed position, and a plug disposed within the chamber at an end of the injection spindle opposite that connected to the actuator wherein when the injection spindle is in said deployed position, the plug blocks the injection port such that when the injection head is removed from the injection port, the plug remains in communication with the injection port to block the injection port" as presently recited in claim 38.

Alanko is utilized by the Office Action for its disclosure of a "base mold" and "soft tool", but the Office Action admits "Alanko is silent to the claimed injection head" (page 9 of the Office Action). Rather the Office Action asserts that Brew discloses the features of the injection head. However, the Office Action fails to indicate which structure of Brew discloses the "spindle slidably retained within the chamber between an ejection and deployed position." The Office Action alleges that "end of 64" of Brew is analogous to the plug recited in claim 38. However, if the Office Action were to allege that 64 is also the "spindle", Brew would fail to disclose the separate structures (spindle and plug) recited in the present claim. Further, the spindle is recited as a portion of the injection head in the present claim. Therefore, removal of the injection head from the injection port means that the entire spindle is removed from the injection port as well, leaving behind only the recited plug. As Brew does not have these analogous structures, it cannot be said that Brew anticipates the present claim. As Hynes is only utilized for its disclosure of an actuator connected to the housing, Hynes also fails to disclose the missing structure. Therefore the Applicants respectfully request this rejection be withdrawn.

For all of the reasons mentioned above, the Applicants respectfully request reconsideration and allowance of all pending claims. The Examiner is invited to contact the undersigned attorney to expedite prosecution.

The Commissioner is hereby authorized to charge any additional fees which may be required with respect to this communication, or credit any overpayment, to Deposit Account No. 06-1135.

Respectfully submitted,

FITCH, EVEN, TABIN & FLANNERY

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